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ABSTRACT OF THE DISCLOSURE

A semiconductor device having performance comparable with a MOSFET is provided. An active layer of the semiconductor device is formed by a crystalline silicon film crystallized by using a metal element for promoting crystallization, and further by carrying out a heat treatment in an atmosphere containing a halogen element to carry out gettering of the metal element. The active layer after this process is constituted by an aggregation of a plurality of needle-shaped or column-shaped crystals. A semiconductor device manufactured by using this crystalline structure has extremely high performance.